

FILE 'HOME' ENTERED AT 15:47:41 ON 28 FEB 2003

=> file agricola biosis caplus caba

=> s miamp1

L1 15 MIAMP1

=> duplicate remove l1

L2 5 DUPLICATE REMOVE L1 (10 DUPLICATES REMOVED)

=> d ti 1-5

L2 ANSWER 1 OF 5 AGRICOLA

DUPLICATE 1

TI Enhanced quantitative resistance to *Leptosphaeria maculans* conferred by expression of a novel antimicrobial peptide in canola (*Brassica napus* L.).

L2 ANSWER 2 OF 5 AGRICOLA

DUPLICATE 2

TI MIAMP1, a novel protein from *Macadamia integrifolia* adopts a Greek key beta-barrel fold unique amongst plant antimicrobial proteins.

L2 ANSWER 3 OF 5 BIOSIS

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DUPLICATE 3

TI Purification and characterization of a plant antimicrobial peptide expressed in *Escherichia coli*.

L2 ANSWER 4 OF 5 CAPLUS

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TI Antimicrobial protein MIAMP1 from *Macadamia integrifolia* and related Proteaceae species

L2 ANSWER 5 OF 5 AGRICOLA

DUPLICATE 4

TI Purification, characterisation and cDNA cloning of an antimicrobial peptide from *Macadamia integrifolia*.

=> d bib abs 1-2 4-5

L2 ANSWER 1 OF 5 AGRICOLA

DUPLICATE 1

AN 2003:7371 AGRICOLA

DN IND23301588

TI Enhanced quantitative resistance to *Leptosphaeria maculans* conferred by expression of a novel antimicrobial peptide in canola (*Brassica napus* L.).

AU Kazan, K.; Rusu, A.; Marcus, J.P.; Goulter, K.C.; Manners, J.M.

AV DNAL (QK981.4.M63)

SO Molecular breeding : new strategies in plant improvement, 2002. Vol. 10, No. 1/2. p. 63-70

Publisher: Dordrecht ; Boston : Kluwer Academic Publishers, c1995-

CODEN: MOBRFL; ISSN: 1380-3743

NTE Includes references

CY Netherlands

DT Article

FS Non-U.S. Imprint other than FAO

LA English

AB The novel antimicrobial peptide MIAMP1, originally isolated from the seeds of *Macadamia integrifolia*, was constitutively expressed in transgenic tobacco and canola plants to test its effect on disease resistance. Analysis of plants transformed with 35S-MIAMP1 construct by northern and western blot analyses demonstrated the presence of MIAMP1 mRNA and the mature peptide in the transgenic plants. The MIAMP1 purified from the leaves of transgenic plants was biologically active with the same in vitro antifungal activity as native MIAMP1 purified from the seeds of macadamia. The effect of MIAMP1 expression on the economically important canola pathogen *Leptosphaeria maculans* (causal agent of blackleg disease) was evaluated in comparison with an untransformed control line and an azygous segregant derived from one of the transgenic lines. Lesion development on the cotyledons of the inoculated canola seedlings was significantly reduced in the T2 progeny of seven independently transformed transgenic lines. These results suggested that, transgenic canola expressing MIAMP1 may be useful for the management of blackleg disease.

L2 ANSWER 2 OF 5 AGRICOLA

DUPLICATE 2

AN 1999:79243 AGRICOLA

DN IND22017828

TI MIAMP1, a novel protein from *Macadamia integrifolia* adopts a Greek key beta-barrel fold unique amongst plant antimicrobial proteins.

AU McManus, A.M.; Nielsen, K.J.; Marcus, J.P.; Harrison, S.J.; Green, J.L.; Manners, J.M.; Craik, D.J.

CS The University of Queensland, Brisbane, Queensland, Australia.

AV DNAL (442.8 J8224)

SO Journal of molecular biology, Oct 29, 1999. Vol. 293, No. 3. p. 629-638

Publisher: London ; New York : Academic Press, 1959-

CODEN: JMOBAK; ISSN: 0022-2836

NTE Includes references

CY England; United Kingdom

DT Article

FS Non-U.S. Imprint other than FAO

LA English

L2 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2003 ACS

AN 1997:533671 CAPLUS

DN 127:188125

TI Antimicrobial protein **MiAMP1** from *Macadamia integrifolia* and related Proteaceae species

IN Manners, John Michael; Marcus, John Paul; Goulter, Kenneth Clifford; Green, Jodie Lyn; Harrison, Stuart John

PA Cooperative Research Centre for Tropical Plant Pathology, Australia; Manners, John Michael; Marcus, John Paul; Goulter, Kenneth Clifford; Green, Jodie Lyn; Harrison, Stuart John

SO PCT Int. Appl., 37 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9728185	A1	19970807	WO 1997-AU52	19970131
	W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, ME, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
	CA 2251537	AA	19970807	CA 1997-2251537	19970131
	AU 9715369	A1	19970822	AU 1997-15369	19970131
	AU 713909	B2	19991216		
	EP 877756	A1	19981118	EP 1997-901479	19970131
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			
	CN 1216550	A	19990512	CN 1997-192738	19970131
	BR 9707481	A	20000104	BR 1997-7481	19970131
	JP 2001521364	T2	20011106	JP 1997-527180	19970131
	US 2002108144	A1	20020808	US 2001-882434	20010615
PRAI	AU 1996-7802	A	19960131		
	WO 1997-AU52	W	19970131		
	US 1998-117615	B2	19981109		
	US 1999-364395	B1	19990730		

AB A new family of antimicrobial proteins is described. A prototype protein is isolated from *Macadamia integrifolia*. The peptide, termed **MiAMP1**, is highly basic with an estd. pI of 10.1, a mass of 8.1 kDa, and contains 76 amino acids including 6 cysteine residues plus a 26-amino-acid signal peptide at the N-terminus of the preprotein. Purified **MiAMP1** inhibits the growth of a variety of fungal oomycete and gram-pos. bacterial phytopathogens in vitro, and was nontoxic to plant and mammalian cells. DNA encoding the protein is also described as well as DNA constructs which can be used to express the antimicrobial protein or to introduce the antimicrobial protein into a plant. Compsns. comprising the antimicrobial protein or the antimicrobial protein per se can be administered to plants or mammalian animals to combat microbial infestation.

L2 ANSWER 5 OF 5 AGRICOLA

DUPLICATE 4

AN 97:53763 AGRICOLA

DN IND20580770

TI Purification, characterisation and cDNA cloning of an antimicrobial peptide from *Macadamia integrifolia*.

AU Marcus, J.P.; Goulter, K.C.; Green, J.L.; Harrison, S.J.; Manners, J.M.

CS The University of Queensland, Brisbane, Australia.

SO European journal of biochemistry, Mar 1997. Vol. 244, No. 3. p. 743-749

Publisher: Berlin : Springer-Verlag Berlin.

CODEN: EJBICAI; ISSN: 0014-2956

NTE Includes references

CY Germany

DT Article

FS Non-U.S. Imprint other than FAO

LA English

AB An antimicrobial peptide with no significant amino acid sequence similarity to previously described peptides has been isolated from the nut kernels of *Macadamia integrifolia*. The peptide, termed **MiAMP1**, is highly basic with an estimated pI of 10.1, a mass of 8.1 kDa and contains 76 amino acids including 6 cysteine residues. A cDNA clone containing the entire coding region corresponding to the peptide was obtained. The deduced amino acid sequence of the cDNA indicated a 26-amino-acid signal peptide at the N-terminus of the preprotein. Purified **MiAMP1** inhibited the growth of a variety of fungal, oomycete and gram-positive bacterial phytopathogens in vitro. Some pathogens exhibited close to 100% inhibition in less than 1 micromolar peptide (5 micrograms/ml). Antimicrobial activity was diminished against most, but not all, microbes in the presence of calcium and potassium chloride salts (1 mM and 50 mM, respectively). **MiAMP1** was active against bakers

yeast, was inactive against *Escherichia coli* and was non-toxic to plant and mammalian cells. Analysis of genomic DNA indicated that MiAMP1 was encoded on a single copy gene containing no introns. The MiAMP1 gene may prove useful in genetic manipulations to increase disease resistance in transgenic plants.

=> logoff hold

STN INTERNATIONAL SESSION SUSPENDED AT 15:50:42 ON 28 FEB 2003

